TRANSACTIONS

OF THE

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, June 5, 1905.

The President, HENRY R. WHARTON, M.D., in the Chair.

SILVER PLATE AND SCREW FIXATION IN FRACTURES OF THE TIBIA.

DR. JOHN H. JOPSON showed a boy in whom he had treated a compound fracture of the tibia by primary fixation of the fragments by means of Halsted's silver splint and screws. The wound had healed with the splint *in situ*, and the result was a perfect one as far as the fracture was concerned. There were certain advantages of the splint and screws over silver wire in the primary fixation of recent fractures which Dr. Jopson thought were sometimes overlooked. In the present case, operation was demanded in the first place because of the difficulty of reduction of an oblique fracture of the tibia complicated by a small wound. The broken ends had rotated in opposite directions. After incision, reduction was satisfactorily accomplished. To have now drilled and wired the fragments would have required much more manipulation and traumatism than the use of the splint and screws, which were easily applied without disturbing the relations of the bone in the wound, and which held the fragments firmly in apposition. Union took place as rapidly as in a simple fracture. Steel screws were used, as silver ones were not at hand. Nearly three months have elapsed since operation, and, while the wound is still solid, there is a little tenderness and swelling of recent development at the site of the splint, which probably means that it will require removal.

DR. JOHN B. ROBERTS said that this method had been for years a favorite with Dr. L. W. Steinbach, with whom he was associated at the Polyclinic Hospital. The expedient was uniformly successful in holding together the fragments, but he thought that lately Dr. Steinbach is not so enthusiastic regarding its use. He finds that some of the cases are followed by suppuration, due largely to the necessary laceration of the soft parts in applying the splint. This sequel is more apt to occur in deep fractures than in those of superficial bones such as the tibia, the wounding of muscles and other soft tissues being much more extensive in the former. Notwithstanding, Dr. Steinbach secures good results. Dr. Roberts has never employed the splint, but once removed one which had been inserted by another surgeon. The fracture originally was a bad one, and suppuration followed. In treating a recent fracture similar to that reported by Dr. Jopson, Dr. Roberts exposed the fragments and put in two steel staples of his own design, which in some ways are preferable to other devices for holding the fragments in apposition. To insert a wire, the ends of the bone must be freed and drilled, which of necessity cuts and irritates the tissues; in addition, the ends of the bone will wobble when the wires are inserted. Dr. Roberts used a staple which possesses two projecting points, which are driven into holes drilled for them in the fragments. This is simpler than inserting screws and gives greater rigidity than is attainable with wire. Dr Roberts has also employed fracture-nails with ends fashioned as drills. These are inserted into the bones and make the apposition of the fragments a rigid connection. They are afterwards pulled out. They possess one advantage in that they may be used in subcutaneous fractures.

Dr. Richard H. Harte said that he had used the Halsted splint a number of times, but does not now employ it so often as formerly. Regarding this appliance, an important point to remember is the necessity of using a long splint. Too many surgeons employ a short splint which furnishes support only at the extreme ends of the fragments. It is best to insert four screws, two in each fragment. If a short splint and two screws only are employed, the support given thereby is very slight, and the method possesses no advantage over wiring. Dr. Harte's experience is that removal of the splint is required in essentially every case; removal, however, is a very simple process. As to the use of iron screws by Dr. Jopson, he believes such screws are better than the silver ones as ordinarily sold. The latter are imperfectly made, the threads being much inferior to those on the iron wood-screws, which he would not hesitate to use in a similar case.

DR. JOPSON, in closing, said the staple described by Dr. Roberts appealed to him as being a good appliance, but the Halsted splint has superior advantages. The latter may be cut in desired lengths for any case. In the one reported, the fracture was oblique, and the fragments were held very firmly by two screws above and one below the line of separation. He was quite surprised when the sinus which had formed at the site of a gauze drain underwent spontaneous closure. It will be a simple matter to remove the splint if necessary, and will cause no damage, as the purpose for which the splint was inserted has now been long accomplished.

LAMINECTOMY FOR FRACTURE OF VERTEBRA.

DR. JAMES K. YOUNG presented a woman who fell eight years ago, fracturing the spine in the dorsolumbar region. In the course of her treatment, a laminectomy was performed by Dr. Ashhurst at the University Hospital. After three months patient was discharged. She was not able to move below the waist. Sensation was absent.

One year after her fall, she went to the Orthopædic Hospital, where she was under the care of Dr. S. Weir Mitchell. She was treated with massage, static electricity, and rest. Improved gradually, until in the course of two months she could walk in a wheeling-crutch. After two months more on crutches she began to walk with a cane.

On October 8, 1904, she came under the observation of Dr. Young, who found that she could then walk on a level, but was unable to walk up and down stairs. Was unable to stand alone. Right leg has lack of co-ordination. Massage, electricity, and special movements were directed to be given to encourage co-ordination. The posterior group of muscles in the thigh and calf are the ones most affected. There is some deviation of the spine. Spinal support applied.

June 1, 1905, Dr. Young finds that she is able to walk up and down stairs with the use of a cane. Is not able to stand unless she can touch something, must move if she cannot hold to something. Legs are much stronger. The right leg is slightly numb. Ever since the injury, she has had a burning sensation in the right leg in the region of the sciatic nerve. This sensation begins in the heel and goes up the back of the leg. It is not continuous, but comes and goes. She experiences it every day. There is pain in the back, in the lumbar region, sometimes severe, and usually accompanied by headache.

Recently she has not had as good vision in the left eye as in the right, especially when she is fatigued. Tested the vision at thirteen inches, and found the right eye much better than the left. She sleeps well, has a good appetite, and the general health is good. She jumped several inches from the floor to-day. In her own home she frequently walks without support.

Dr. Young said that his object in presenting this case was to direct attention to the importance of the after-treatment of fractures of the spine, particularly by the use of spinal supports, massage, electricity, and of every known means which will restore function to the muscles. He had frequently been asked to examine cases of fracture of the spine, one or two years after a laminectomy, where a marked kyphosis was present and where efficient support had not been used.

PARALYSIS OF ARM FROM DISLOCATION OF SHOULDER AT BIRTH.

DR. JAMES K. YOUNG presented an infant, aged nine months, whose left shoulder was dislocated during birth by traction, resulting in paralysis. Electrical treatment was given. The case had been diagnosed as birth palsy.

Examination, March 19, 1904, showed a backward dislocation of the humerus, with limitation of motion, deformity, and pain upon movement. The arm was held rigidly at the side in a position of marked pronation. Skiagraph showed backward and downward dislocation of the humerus.

He reduced the dislocation April 7, 1904, under anæsthesia. Two months later there was some limitation at the elbow-joint, and some rotation of the radius. This he broke up by forcible manipulation, under anæsthesia. Electricity, massage, and exercises were given, which was followed by marked improvement, continuing up to the present time.

His object in showing this case was to direct the attention to the frequency with which dislocation of the shoulder is mistaken for birth palsy. Injury to the brachial plexus may result from injuries during birth, but dislocations of the shoulder, if allowed to continue, will produce pressure palsies resembling birth palsies, as in the case exhibited.

SPIRAL FRACTURE OF THE HUMERUS CAUSED BY JIU-JITSU.

Dr. George Morris Dorrance presented a boy, aged fourteen years, who came under his care at St. Agnes's Hospital on March 30, 1905, with the history that while practising jiu-jitsu with a playmate he had fractured his humerus. The hold gotten by his opponent consisted in catching him by the left wrist with the forearm flexed on the arm, and rotating the forearm outward.

When seen by Dr. Dorrance the deformity consisted of an outward and upward displacement of the upper end of the lower fragment with one and three-fourths inch shortening; this was overcome by putting the arm on an anterior angular splint with four pounds hanging from arm. At present he has one-half inch of shortening, with full power and use of arm. Massage and passive movements were started on the seventh day, and continued for five weeks.

Dr. Richard H. Harte said the skiagraphs shown by Dr. Dorrance illustrated what he had seen in a fracture caused by a similar accident. Two men engaged in a friendly trial of strength attempted to throw each other's arm to the side, and the humerus of one was fractured. Some time afterwards the man died from other causes, and the specimen showed the same kind of fracture as that just reported. The line of separation was spiral in shape, as though the bone had been twisted off.

OPERATIONS PERFORMED AT THE GERMAN HOSPITAL.

Dr. John B. Deaver presented a report giving an analysis of the operations performed at the public clinics for students held at the German Hospital during the session of 1904–05.